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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,637	12/20/2000	Pantelis Monogioudis	12-31	5635

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EXAMINER

MILLER, BRANDON J

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,637

Applicant(s)

MONOGIOUDIS ET AL.

Examiner

Brandon J Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 11-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,9,11,21 and 22 is/are allowed.
- 6) ☒ Claim(s) 4-8 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response

Allowable Subject Matter

Claims 1, 3, 9, 11, and 21-22 are allowable.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1 the limitation of “receiving information from the user equipment, the information received from the user equipment comprising a value representative of an excess signal-to-noise ratio determined by the user equipment as the amount by which a signal-to-noise ratio value of one or more user channel signals received at the user equipment exceeds a target signal-to-noise ratio value” is patentably distinct over prior art. Claims 3 and 21 are allowable based on their dependence of claim 1.

Regarding claim 9 the limitation of “wherein the information received from the user equipment comprises an excess signal-to-noise ratio value determined as the amount by which a signal-to-noise ratio value of one or more user channel signals received at the user equipment exceeds a target signal-to-noise ratio value” is patentably distinct over prior art. Claim 11 is allowable based on its dependence of claim 9.

Regarding claim 22 the limitation of “wherein: the base stations use the determined downlink reference power during a fast power control loop; the user equipment determines the determined downlink reference power in a slow control loop; and the fast power control loop is implemented multiple times for each implementation of the slow control loop” is patentably distinct over prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6-7, 12, 14-15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson in view of Toskala.

Regarding claim 4 Persson teaches a method for use in wireless equipment (see col. 4, lines 66-67 and col. 5, lines 1-9). Persson teaches receiving user channel transmit power information from base stations involved in a soft handoff with user equipment (see col. 2, lines 10-12 and col. 8, lines 43-46). Persson teaches receiving information from the user equipment wherein the information comprises received user channel transmit power levels and signal-to-interference values of signals received from each base station (see col. 8, lines 35-43). Persson teaches determining a downlink reference power from the received user channel transmit power information and the received information from the user equipment; and transmitting the determined downlink reference power to the base stations (see col. 8, lines 39-49 and col. 10, lines 28-31). Persson does not specifically teach wherein the information comprises an identifier of a base station with a received signal at the user equipment that is stronger than the received signal of other base stations. Persson does teach identifying a base station determined to be a dominant base station (see col. 8, lines 53-55 & 62-64) and a control frame identifying a specific base station (see col. 11, lines 11-12). Toskala teaches an identifier of a base station with a

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received signal at the user equipment that is stronger than the received signal of other base stations (see col. 7, lines 66-67 and 8, lines 1-5 & 21-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the identifying of a dominant base station in Persson adapt to include an identifier of a base station with a received signal at the user equipment that is stronger than the received signal of other base stations because a determination as to which base station has a received signal at the user equipment that is strongest can be made when the current transmit power level of each base station is received and it would allow for an improved radio link to support mobile communication.

Regarding claim 6 Persson teaches a method for use in wireless equipment during soft handoff of user equipment with a number of base stations (see abstract, col. 4, lines 66-67 and col. 5, lines 1-9). Persson teaches calculating, at the user equipment, a signal-to-noise ratio value of the signals received from each base station (see col. 8, lines 35-39). Persson teaches transmitting the identity of an identified base station (see col. 11, lines 9-12). Persson teaches transmitting the calculated signal-to-noise ratio values from the user equipment to a control point of a wireless system (see col. 8, lines 35-43). Persson does not specifically teach identifying, at user equipment, a base station with a received signal at the user equipment that is stronger than the received signal of one or more other base stations. Persson does teach identifying a base station determined to be a dominant base station (see col. 8, lines 53-55 & 62-64) and a control frame identifying a specific base station (see col. 11, lines 11-12). Toskala teaches an identifier of a base station with a received signal at the user equipment that is stronger than the received signal of other base stations (see col. 7, lines 66-67 and 8, lines 1-5 & 21-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the

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identifying of a dominant base station in Persson adapt to include identifying, at user equipment, a base station with a received signal at the user equipment that is stronger than the received signal of one or more other base stations because a determination as to which base station has a received signal at the user equipment that is strongest can be made when the current transmit power level of each base station is received and it would allow for an improved radio link to support mobile communication.

Regarding claim 7 Persson teaches a control point that is a common control point (see col. 5, lines 4-9).

Regarding claim 12 Persson teaches an apparatus for use in wireless equipment (see col. 4, lines 66-67 and col. 5, lines 1-9). Persson teaches a transceiver for receiving user channel transmit power information from base stations involved in a soft handoff with user equipment (see col. 2, lines 10-12 and col. 8, lines 43-46). Persson teaches receiving information from the user equipment wherein the information comprises received user channel transmit power levels and signal-to-interference values determined by the user equipment for the user channel signals received from each base station (see col. 8, lines 35-43). Persson teaches transmitting a downlink reference power to the base stations; a processor for use in determining a downlink reference power from the received user channel transmit power information and the received information from the user equipment (see col. 8, lines 39-49 and col. 10, lines 28-31). Persson does not specifically teach wherein the information comprises an identifier of a base station with a received signal at the user equipment that is stronger than the received signal of other base stations. Persson does teach identifying a base station determined to be a dominant base station (see col. 8, lines 53-55 & 62-64) and a control frame identifying a specific base station (see col.

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11, lines 11-12). Toskala teaches an identifier of a base station with a received signal at the user equipment that is stronger than the received signal of other base stations (see col. 7, lines 66-67 and 8, lines 1-5 & 21-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the identifying of a dominant base station in Persson adapt to include an identifier of a base station with a received signal at the user equipment that is stronger than the received signal of other base stations because a determination as to which base station has a received signal at the user equipment that is strongest can be made when the current transmit power level of each base station is received and it would allow for an improved radio link to support mobile communication.

Regarding claim 14 Persson teaches an apparatus for use in wireless equipment during soft handoff of user equipment with a number of base stations (see abstract, col. 4, lines 66-67 and col. 5, lines 1-9). Persson teaches an apparatus comprising user equipment having: a processor for use in calculating signal-to-noise ratio values for user channel signals received from each base station (see col. 8, lines 35-39). Persson teaches transmitting the identity of an identified base station (see col. 11, lines 9-12). Persson teaches transmitting the calculated signal-to-noise ratio value from the user equipment to a control point of a wireless system (see col. 8, lines 35-43). Persson does not specifically teach user equipment having: a processor for use in identifying a base station with a received signal at the user equipment that is stronger than the received signal of one or more other base stations. Persson does teach identifying a base station determined to be a dominant base station (see col. 8, lines 53-55 & 62-64) and a control frame identifying a specific base station (see col. 11, lines 11-12). Toskala teaches an identifier of a base station with a received signal at the user equipment that is stronger than the received

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signal of other base stations (see col. 7, lines 66-67 and 8, lines 1-5 & 21-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the identifying of a dominant base station in Persson adapt to include user equipment having: a processor for use in identifying a base station with a received signal at the user equipment that is stronger than the received signal of one or more other base stations because a determination as to which base station has a received signal at the user equipment that is strongest can be made when the current transmit power level of each base station is received and it would allow for an improved radio link to support mobile communication.

Regarding claim 15 Persson, Toskala, and Wallentin teach a device as recited in claim 7 and is rejected given the same reasoning as above.

Regarding claim 17 Persson teaches a transmission frame representing data embodied in a wireless transmission signal (see col. 4, lines 40-41 and col. 7, lines 41-44). Persson teaches a transmission frame comprising a first portion and a second portion (see col. 7, lines 53-55). Persson teaches a portion of a control frame comprising at least one bit for conveying data representative of an identifier for identifying a base station (see col. 11, lines 9-12). Persson teaches conveying data representative of signal-to-interference ratio values of received signals from each base station at the user equipment (see col. 8, lines 35-43). Persson does not specifically teach identifying a base station whose received signal at a user equipment is stronger than signals received at the user equipment from one or more other base stations. Persson does teach identifying a base station determined to be a dominant base station (see col. 8, lines 53-55 & 62-64). Toskala teaches an identifier of a base station with a received signal at the user equipment that is stronger than the received signal of other base stations (see col. 7, lines 66-67

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and 8, lines 1-5 & 21-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the identifying of a dominant base station in Persson adapt to include identifying a base station whose received signal at a user equipment is stronger than signals received at the user equipment from one or more other base stations because a determination as to which base station has a received signal at the user equipment that is strongest can be made when the current transmit power level of each base station is received and it would allow for an improved radio link to support mobile communication.

Regarding claim 18 Persson teaches a transmission frame that is conveyed via a radio resource control based protocol (see col. 7, lines 50-54).

Regarding claim 19 Toskala teaches physical layer signaling (see col. 2, lines 9-11).

Claims 5, 8, 13, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson in view of Toskala and Wallentin.

Regarding claim 5 Persson and Toskala teach a device as recited in claim 4 except for wherein the signal-to-noise ratio value represents an excess signal to noise ratio value determined as the amount by which the signal-to-noise ratio value of the signal received from the identified base station exceeds a target signal-to-noise ratio value. Wallentin teaches a signal-to-noise ratio value determined as the amount by which the signal-to-noise ratio value differs from a target signal-to-noise ratio value (see col. 5, lines 26-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include wherein the signal-to-noise ratio value represents an excess signal to noise ratio value determined as the amount by which the signal-to-noise ratio value of the signal received from the

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identified base station exceeds a target signal-to-noise ratio value because this would allow for improved quality based power control in mobile telecommunication systems.

Regarding claim 8 Persson, Toskala, and Wallentin teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 13 Persson, Toskala, and Wallentin teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 16 Persson, Toskala, and Wallentin teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 20 Persson, Toskala, and Wallentin teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Response to Arguments

Applicant's arguments with respect to claims 4-8 and 12-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vanghi U.S Patent No. 6,393,276 B1 discloses mobile station assisted forward link open loop power and rate control in a CDMA system.

Butovitsch et al. U.S. Patent No. 6,259,927 B1 discloses transmit power control in a radio communication system.

Tiedemann, Jr. U.S Patent No. 6,275,478 B1 discloses methods and apparatuses for fast power control of signals transmitted on a multiple access channel.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 571-272-7869. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



May 17, 2005



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